Claims:

1. A tribological device, in particular a miniature anti-friction bearing, with rolling bodies which travel along roller tracks, at least one rolling body consisting at least partially of zirconium dioxide that is stabilized with an additive, and the zirconium dioxide having at least partially a tetragonal structure, characterized in that at least the surface of the rolling body consists of zirconium dioxide that is stabilized with MgO and/or CeO_2 and/or Sc_2O_3.

2. The device as claimed in one of the preceding claims, characterized in that the zirconium dioxide has a primary particle size of less than 300 nm, preferably of less than 100 nm.

3. A tribological device, in particular a miniature anti-friction bearing, with rolling bodies which travel along roller tracks, at least one rolling body consisting, at least on the surface, of zirconium dioxide that is stabilized with Y_2O_3, and the zirconium dioxide having at least partially a tetragonal structure, in particular as claimed in claim 1, characterized in that the zirconium dioxide has a primary particle size of less than 300 nm, preferably of less than 100 nm.

4. The tribological device as claimed in claim 1, characterized in that, relative to its mass, at least half of the zirconium dioxide has a tetragonal structure.

5. The device as claimed in one of the preceding claims, characterized in that almost the entire zirconium dioxide has a tetragonal structure.

6. The device as claimed in one of the preceding claims, characterized in that at least one rolling body consists completely of zirconium dioxide that is stabilized with an additive.

7. The device as claimed in one of the preceding claims, characterized in that all the rolling bodies of an anti-friction bearing consists of stabilized zirconium dioxide.

8. The device as claimed in one of the preceding claims, characterized in that the rolling bodies have a radius of ≤ 4 mm.

9. The device as claimed in one of the preceding claims, characterized in that the rolling bodies are balls.

10. The device as claimed in one of the preceding claims, characterized in that the rolling bodies are rollers or needles.

11. The device as claimed in one of the preceding claims, characterized in that the rollers have an axial, elliptic or parabolic edge drop.

12. The device as claimed in one of the preceding claims, characterized in that the zirconium dioxide is stabilized with 0.5 to 5 percent by weight of MgO.

13. The device as claimed in one of the preceding claims, characterized in that the zirconium dioxide comprises a proportion with a cubic, tetragonal and less than 10 percent by weight monoclinic zirconium dioxide phase.

14. The device as claimed in one of the preceding claims, characterized in that the zirconium

dioxide is stabilized with 8 to 26 percent by weight of CeO_2.

15. The device as claimed in one of the preceding claims, characterized in that the zirconium dioxide is stabilized with 0.5 to 13 percent by weight of Sc_2O_3.

16. The device as claimed in one of the preceding claims, characterized in that the zirconium dioxide is stabilized with 0.1 to 4.5 percent by weight of Y_2O_3.

17. The device as claimed in one of the preceding claims, characterized in that 0.5 to 0.9 percent by weight of Al_2O_3 and/or Cr_2O_3 are added, said additive or additives being dissolved in the zirconium dioxide lattice or forming phases with the zirconium dioxide that is stabilized according to one of the preceding claims.

18. The device as claimed in one of the preceding claims, characterized in that the rolling bodies are produced from zirconium dioxide by the sol-gel process.

19. The device as claimed in one of the preceding claims, characterized in that the rolling bodies are sintered from zirconium dioxide.

20. The device as claimed in one of the preceding claims, characterized in that the rolling bodies are sintered by pressureless sintering and/or gas pressure sintering and/or hot isostatic sintering.